

## CROSS LINGUISTIC STUDY OF COARTICULATORY RESISTANCE OF RETROFLEX

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### ABSTRACT

Speech production system experiences complex dynamic tongue movements for the production of retroflexes. This makes retroflexes distinct from other phonemes. Present study aimed to analyze the articulatory dynamics and coarticulatory pattern of retroflexes across three major languages of India: Hindi, Kannada, and Malayalam. Ninety adult speakers having equal number of native speakers for each language participated as subjects. The stimuli consisted of VCV sequences with C corresponding to voiced/ unvoiced counterparts of retroflex (/ʈ/, /ɖ/) in the context of vowels /a, i, u/. Tongue contours of each phoneme was obtained using Mindray 6600 Ultrasound module and further, coarticulation measurements were done using Articulate Assistance Advanced (AAA). Results indicated that the tongue contour of vowels imitated the pattern of retroflexes, especially in the following context than in preceding context. Coarticulation resistance of retroflexes were more in Hindi compared to Dravidian languages.

**KEYWORDS:** Retroflex, Coarticulation Resistance, Hindi, Dravidian Languages

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